

ABSTRACT

A phase-change optical recording medium capable of implementing record and readout operations of information data through reversible phase transition between amorphous and crystalline states
5 induced by light beam irradiation in a recording layer included in the recording medium, including at least a transparent substrate and contiguous layers formed on the substrate in order as follows, a lower dielectric protective layer, the recording layer, an upper dielectric protective layer, and a reflective/ heat dissipating layer, in which the
10 upper dielectric protective layer essentially consists of a mixture of ZrO₂ and SiO₂, having a composition of (ZrO₂)_{100-x} (SiO₂)_x, where 0 < x < 60 (mole %).

The phase-change optical recording medium may alternatively include at least a reflective/ heat dissipating layer provided contiguously to at least one surface of a recording layer, having a dielectric protective layer interposed between the reflective/ heat dissipating layer and the recording layer, in which the recording layer essentially consists of a phase-change recording material having the Sb₃Te metastable phase, the dielectric protective layer consists of a dielectric material containing
15 ZrO₂ as a major ingredient, and the reflective/ heat dissipating layer consists of Ag, as a major ingredient.
20